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AUTHOR Ruthven, Avis J.; Cunningham, William L.
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ABSTRACT

In order to determine whether egocentrism can be conceptualized as a unitary construct, 100 children (51 four-year-olds, 37 five-year-olds, and 12 six-year-olds) were administered a visual/spatial perspective task, a cognitive/communicative task, and an affective task. All tasks were designed to measure different facets of egocentrism. The 50 males (31 black, 19 white) and 50 females (38 black, 12 white) were randomly selected from those attending day care centers in Volusia County, Florida. All subjects were from single-parent families. A chi-square contingency analysis yielded significant results for the 4-year-olds only, indicating that while performance of 4-year-olds on egocentrism tasks was not independent of the task, the performance of 5- and 6-year-olds was independent of the task presented. These findings lend some support to the notion of a unitary egocentrism construct. The differences in performance for the different age groups were explained by a combination of a verbal comprehension factor and perceptual/spatial ability rather than real differences in egocentrism. (Author/MP)

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# Piaget's Egocentrism: A Unitary Construct?

Avis J. Ruthven

Mississippi State University

William L. Cunningham

Rutland Mental Health Serivce

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Abstract

In order to determine whether egocentrism can be conceptualized as a unitary construct, one hundred children (51 four-year-olds, 37 five-year-olds, and 12 six-year-olds) were administered a visual/spatial perspective task, a cognitive/communicative task, and an affective task; all tasks were designed to measure different facets of egocentrism. The 50 males (31 black, 19 white) and 50 females (38 black, 12 white) were randomly selected from those attending day care centers in Volusia County, Florida; all were from single-parent families. A chi-square contingency analysis yielded significant results for the 4-year-olds only, indicating that while performance of 4-year-olds on egocentrism tasks was not independent of the task, the performance of 5-and 6-year olds was independent of the task presented. These findings lend some support to the notion of a unitary egocentrism construct. The difference in performance for the different age groups was explained by a combination of a verbal comprehension factor and perceptual/spatial ability rather than real differences in egocentrism.

# Piaget's Egocentrism: A Unitary Construct?

## Problem

The preoperational child, according to Piaget (1950), is characterized by egocentrism in thought, language, and behavior. Egocentrism refers to the inability to take another person's point of view. Traditionally, there have been three major foci in the assessment of egocentric behavior: measurements of visual/spatial perspective taking (what does the other see), cognitive/communicative perspective taking (what is the other thinking), and affective perspective taking (what does the other feel). These three ways to operationalize how the other person sees, thinks, or feels, has resulted in mixed support for a unitary construct of egocentrism (Ford, 1979).

The purpose of this study was to further investigate whether egocentrism can be conceptualized as a unitary construct, or whether the various egocentrism tasks are actually measuring different constructs.

## Method

One hundred children (51 four-year-olds, 37 five-year-olds, and 12 six-year-olds) were randomly selected from the children attending day care centers in a county in Southeastern, Florida. There were 50 males (31 black, 19 white) and 50 females (38 black, 12 white); all children were from single-parent families. The following egocentrism measures were administered individually: a cognitive/communicative task developed by Glucksberg and Krauss (1967), which measures the ability to infer cognitions of others as well as to overcome the tendency to attribute one's own knowledge to another in a communicative manner; an affective perspective-taking task developed by Rothenberg (1970), which measures the ability to infer the feelings expressed by others in taped dialogues; and finally, a visual/spatial perspective task developed by Borke (1975), which measures the ability to imagine how an object would be visually described from a different occupied position.

In the cognitive/communicative task, a speaker (the child) and a listener (examiner) were seated at opposite sides of a table with a cardboard screen separating them. Both the speaker and the listener had a set of six blocks, each of which had one design printed on the four vertical facets. Each block had a hole drilled through it so it could be stacked on a peg. The speaker had his blocks presented in random order while the listener's blocks were laid out in random order on the table. The joint task was to build matching stacks of six blocks. Each six-block stacking constituted a trial. Each child was given 4 trials. The child was told that the examiner had identical blocks and that they could communicate freely during the trials. The speaker attempted to describe each stimulus design so that the listener (examiner) could successfully discriminate the referent from the nonreferents. The examiner provided feedback to the child indicating that he understood the description after the first, third and sixth blocks. After the description of the second, fourth and fifth blocks, the examiner said to the child, "I don't understand which one you mean, tell me more about it." The child's tape-recorded response to this feedback was evaluated as a new description (nonegocentric), a modified or elaborated description (nonegocentric) or a repeated description (egocentric) or silence.

The affective egocentrism task consists of four short dialogues between two adults. The situations were designed to appear realistic but not so commonplace that most children would have had previous experience with identical situations. Children are not included or referred to in the tape-recorded dialogues and the actors were not familiar to the children.

Four relatively common emotions were the central emotions for each of the stories: happiness, anger, sadness, and anxiety. Each story consisted primarily of dialogue and the overt action was to be interpreted. The child was asked to concentrate primarily on one of the actors in each of the stories to give each child the same initial focal point in listening to the interaction. Each story depicted a change in feelings for the main character from the initial comments to the later ones. Following each taped

dialogue, the child was asked to describe how the actor felt. To minimize the possibility of carry-over from one story to the next, no two consecutive tape recordings were acted by the same actors. A manual for scoring each of the verbal (recorded) responses of the four stories is provided by the author. Essentially, an accurate mention of changes in feelings during the episode or accurate mention of one of the feelings portrayed by the actor received a nonegocentric rating. Inaccurate descriptions or no mention of feelings were scored as egocentric response.

For her visual/spatial perspective-taking task, Borke used a variant of Piaget and Inhelder's (1956) three mountain experimental task. In this study, the task consisted of two three-dimensional displays. Initially, the children were shown a practice display to orient them to the task and then they were presented the experimental display. As each child entered the room, he or she was seated at a table facing the practice display. This display consisted of a red fire truck. An exact duplicate of the fire truck was on a revolving turntable to the child's left. Each child was introduced to Grover, a doll character from Sesame Street, and told, "Grover is going to play this game with us. He will drive his car along the road. Sometimes Grover likes to stop and look out of his car. Now, the fire truck on this other table turns so you can look at it from any side. When Grover stops to look out of his car, I want you to turn the scene - that moves so you are looking at it in the same way Grover is." The examiner then parked Grover, in turn, at each of the three sides which presented a view different from the child's. If the child incorrectly predicted how the fire truck looked to Grover for any of the three positions, the examiner said, "Sometimes it's hard to tell what Grover sees. Let's go over and look at the fire truck the way Grover sees it." The child, upon returning to his chair, was asked to move the turntable so that the fire truck looks the way Grover saw it. If the child again gave an incorrect response, the examiner moved the turntable so that the fire truck was in the correct position and explained, "This is the way Grover sees the fire truck from where he is parked."

After completing the practice display, the child was shown the experimental display that consisted of two identical papier-mache replicas of Piaget and Inhelder's three mountains: the mountain with a cross on top, the mountain with a snow cap and the mountain with a small house on top.

The procedure for this experimental display was similar to that used in the practice task except that the child was not given any further opportunity to look at the scene from Grover's point of view. If an incorrect position was given by the child, the examiner simply accepted it and moved Grover to the next position. For each child, Grover stopped at each of the three sides which presented a view different from that of the child. The sequence of stops was varied randomly. The starting position of the rotatingdisplay was also randomly varied. The child's response was scored nonegocentric if the revolving display was turned so it matched Grover's perception and scored egocentric if the display conformed to the child's own view. Nonegocentric errors were recorded also.

In order to determine whether performance on the three egocentrism tasks was indicative of a unitary egocentrism construct, a chi-square contingency analysis was done for each age level.

## Results

The chi-square (17.26; df=2) for the 4-year-olds was significant at the .01 level. (See Table 1.) Therefore, the performance on the egocentrism tasks was not independent of the type of task. That is, 4-year-olds gave more nonegocentric than egocentric responses on the spatial/perspective task, while on the other two tasks 4-year-olds gave more egocentric than nonegocentric responses. However, for 5 and 6-year-olds, the chi-squares (3.20, df = 2; 2.67, df = 2) were not significant indicating that performance on the tasks was independent of the type of task presented. When looking at the data for 4-year-olds, egocentrism does not appear to be a unitary construct, while for 5 and 6-year-olds it does seem to be a unitary construct.

## Interpretation

These results lend some support to the notion of a unitary egocentrism construct. The results generally do not support Piaget's contention that children in the preoperational stage tend to be predominantly egocentric in the way they think, feel, and see others' thinking, feeling, and seeing; however, the majority of the youngest children in the sample did give egocentric responses on the tasks measuring how one thinks and feels that others think and feel.

The discrepancy between the performance of 4-year-olds on the cognitive/communicative and affective egocentrism tasks and on the spatial/perspective task might be explained by a combination of a verbal comprehension factor and perceptual/spatial ability rather than real differences in egocentrism. Perhaps 4-year-olds did not perform as well or gave more egocentric responses on the cognitive/communicative and affective tasks when compared to the spatial/perspective task because the former two tasks are more verbal in nature and require more verbal response modes than the latter. The less well-developed verbal comprehension ability of the four-year-olds' may explain their lower performance on these two tasks when compared to the performance of the older children. In addition, the 4-year-olds' comparatively

better performance on the visual/spatial perspective task may be explained by the hypothesis that their perceptual/spatial ability is about as well developed as that of the older children or the task may be primarily a measure of perceptual/spatial ability rather than egocentrism. This hypothesis is supported by Verkozen's (1975) report of non-egocentric performance in 2-year-olds in the visual/spatial domain.

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Table 1

Contingency Table for 4-, 5-, 6-Year-olds

Four-year-olds ($\chi^2$ = 17.26*)

| | Type of Task | | | |
|---|---|---|---|---|
| Type of Response | C/C | A | V/S | Total |
| Egocentric | 35 | 35 | 17 | 87 |
| Non-egocentric | 16 | 16 | 34 | 66 |
| Total | 51 | 51 | 51 | 153 |

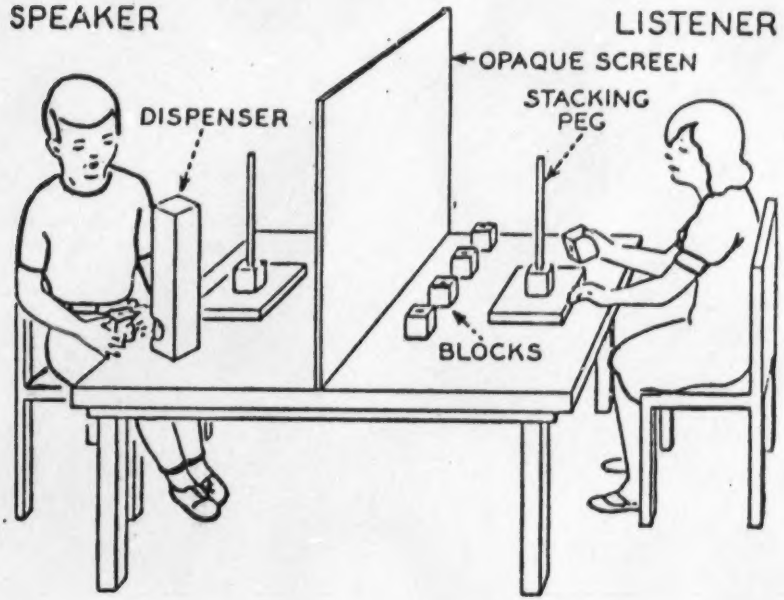
Five-year-olds ($\chi^2$ = 3.20)

| | Type of Task | | | |
|---|---|---|---|---|
| Type of Response | C/C | A | V/S | Total |
| Egocentric | 12 | 6 | 7 | 25 |
| Non-egocentric | 25 | 31 | 30 | 86 |
| Total | 37 | 37 | 37 | 111 |

Six-year-olds ($\chi^2$ = 2.67)

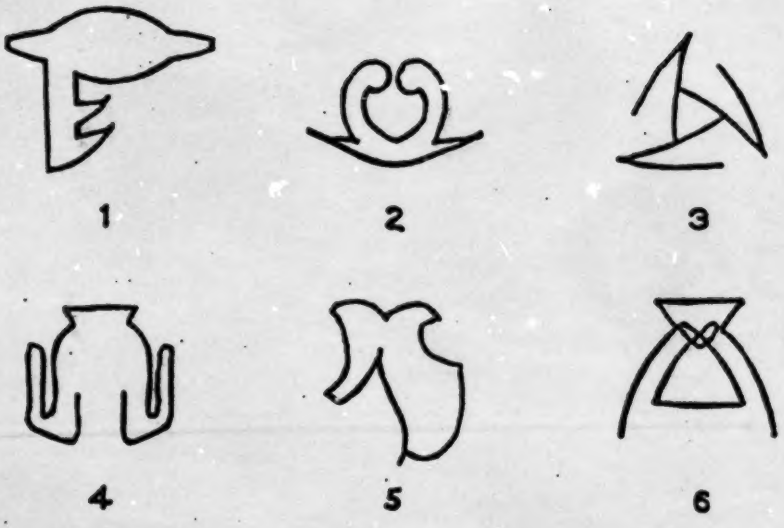
| | Type of Task | | | |
|---|---|---|---|---|
| Type of Response | C/C | A | V/S | Total |
| Egocentric | 5 | 2 | 2 | 9 |
| Non-egocentric | 7 | 10 | 10 | 27 |
| Total | 12 | 12 | 12 | 36 |

* $p < .01$; $df = 2$




THE EXPERIMENTAL SITUATION

Although a male speaker and female listener are shown in this sketch, most of the studies employ same-sex pairs.




The graphic designs employed.

BARBARA B. ROTHENBERG

Table 1

Transcripts of the Four Tape-Recorded Stories

| Person | Dialogue |
|---|---|
| | **Tape 1 Happiness (woman)** |
| M | I wonder if there's anything good on TV tonight. |
| W | I think there's one good program on at 10:00. |
| M | Oh, by the way, I was thinking today about our vacation, and you're right. Going to Yellowstone is our best bet. |
| W | You mean it? (happy and excited) |
| M | Uh-huh. |
| W | That's tremendous. When do you think we can go? |
| M | We could leave next Friday. |
| W | Wonderful! I'll have enough time to have the women over for bridge; it's my turn, you know. Then I can do some shopping the next day. |
| M | You'll be ready by Friday then? |
| W | Yes. It's going to be delightful. Sun and lakes and mountains. I can look forward to it all week. |
| | **Tape 2 Anger (man)** |
| M | Hi dear. I'm home; have you been outside? It's just a perfect day with a slight breeze. Not a cloud in the sky. |
| W | Please, I can't be bothered about the weather. There's too many other things on my mind. |
| M | Is that so! (getting very annoyed) I'm not sure why I even come home anymore. I get such a friendly greeting from you. |
| W | You never care about what's bothering other people. You just come in completely unaware of what might be going on here. |
| M | Oh. Come on. What do you think I am? A mindreader? Do I bring my troubles home with me? Well, do I? |
| W | That's not the point. |
| M | No. Of course not. Whatever I say is not the point. Only you can be right; no one else. |

## Tape 3 Anxiety (woman)

W Well, since you have the evening off, what should we do tonight? Could we go to a movie?

M Oh. I forgot to tell you, I've invited the Jacksons and Greens over for dinner tonight.

W Tonight! Oh no! How can we? I can't be ready.

M Sure you can. Just whip up anything. They're not very fussy.

W But I'd have to clean up the house and pick up some things at the supermarket. I couldn't ever be finished in two hours. How could you expect me to?

M Come on. That's plenty of time.

W Oh! I don't even know where to start.

## Tape 4 Sadness (man)

M How about driving over to my sister's house for a little visit now?

W Do I have to go?

M No, of course not. (beginning to sound sad) I just thought you might want to go.

W I guess I just don't like to do the things you like to do.

M Oh please don't say that.

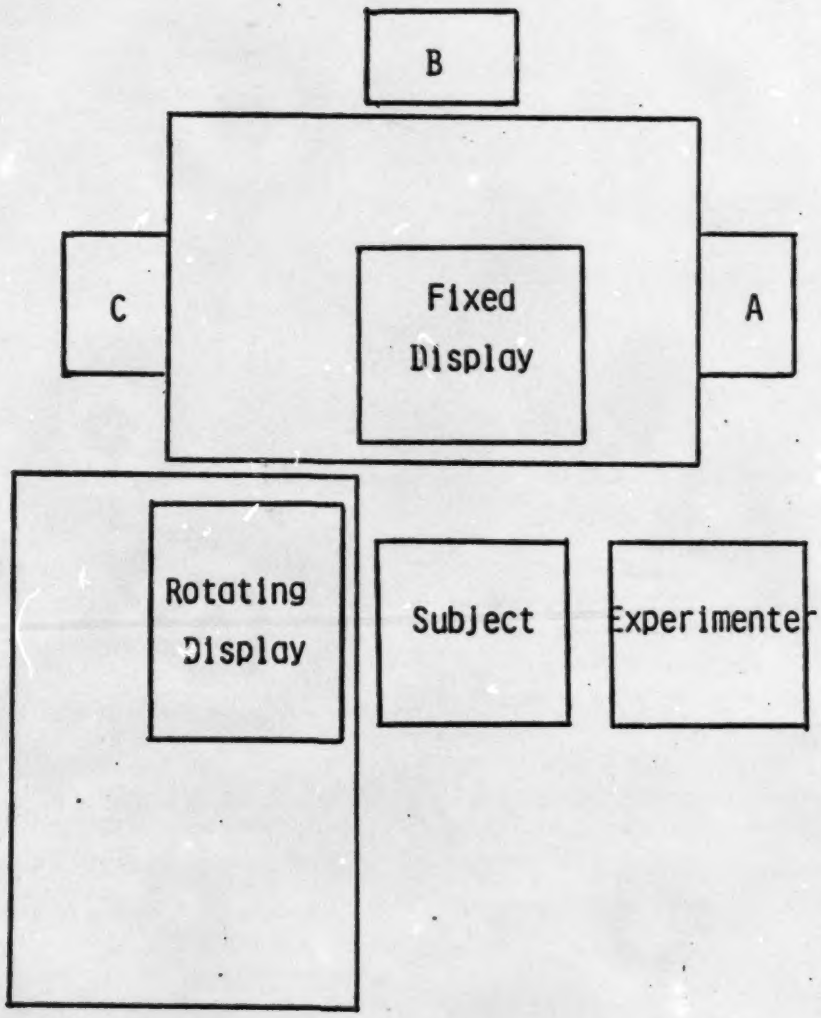
W Well, it seems that way to me.

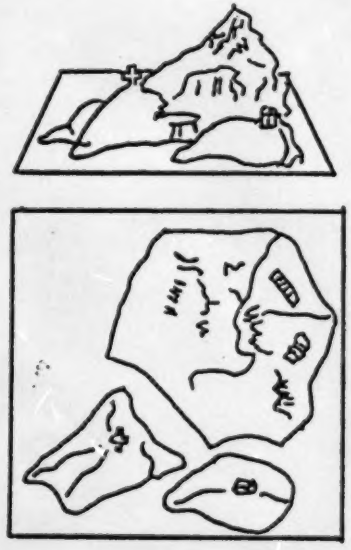
M You don't really think we can make our marriage work, do you?

W To be honest, Robert, sometimes I think we're just too different.

M I was afraid that's what you'd say.

THE EXPERIMENTAL SITUATION



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